

10/531,693

1-11. (CANCELED)

12. (CURRENTLY AMENDED) A [[device]] system for rendering a hydraulic actuating device operational, ~~in particular for a clutch of a motor vehicle;~~ with an emitter-receiver system (5) located in a hydraulic transmission path of the actuating device [[.]] which comprises [[two]] emitter and receiver pistons (14, 16) whose positions, relative to one another, can vary as a function of a desired operating ~~behaviour~~ behavior of the hydraulic actuating device, ~~the two pistons being an emitter piston (14) and [[a]] the receiver piston (16) of the emitter-receiver system (5) and being located in a cylinder so that the [[two]] emitter and the receiver pistons can move axially relative to one another and, together with an inside wall of said cylinder, define a filling space at a boundary of which is positioned a filling opening (23) for a fluid such that a volume constancy is ensured, with a hydraulic supply and with a fluid supply unit (24) to the emitter-receiver system (5), which comprises at least one valve (25) serving to deliver an essentially constant volume flow, which is acted upon by a control device (26) constructed in such a manner that the volume flow released by the fluid supply unit (24), of fluid flowing into the emitter-receiver system (5), does not exceed a limiting volume flow (Q_K),~~

wherein the at least one valve (25) is controlled by impulses from the impulse control device (26) and a hydraulic line branch (34) is in the fluid supply unit (24) to which at least one further equalization impulse valve (32, 33) is connected downstream from the line branch (34) to allow a flow of the fluid from the at least one valve (25) to a collection tank (37) to regulate a pressure at the line branch (24) for filling of the filling space in accordance with a flow-technological practice.

13. (CURRENTLY AMENDED) The [[device]] system according to claim 12, wherein the impulse valve control device (26) comprises a control element (27) which maintains the volume flow in the area of the filling opening (23) at a flow level which ensures an essentially constant volume constancy of the filling space.

14. (CURRENTLY AMENDED) ~~The device according to claim 13, wherein~~ A system for rendering a hydraulic actuating device operational, the system including an emitter-receiver system (5) located in a hydraulic transmission path of the hydraulic actuating device and comprising a cylinder accommodating an emitter piston (14) and

24/06 11:52 AM

- 2 -

10/531,693

a receiver piston (16), a position of the emitter piston (14) relative to a position of the receiver piston (16) can vary as a function of a desired operating behavior of the hydraulic actuating device, the emitter piston (14) and the receiver piston (16) both being axially movable relative to one another and, together with an inwardly facing wall of the cylinder, defining a filling space communicating with a filling opening (23) for supplying hydraulic fluid from a fluid supply unit (24) to the emitter-receiver system (5) at a desired volume flow;

the fluid supply unit (24) including at least one impulse valve (25) for delivering an essentially constant volume flow and a control device (26) for controlling the essentially constant volume flow, supplied by the fluid supply unit (24) to the emitter-receiver system (5), so that the essentially constant volume flow does not exceed a limiting volume flow (Q_k);

wherein the at least one impulse valve (25) is controlled by impulses from the control device (26) and the fluid supply unit (24) has at least one additional impulse valve (32 or 33) connected thereto by a hydraulic line branch (34); and

[[the]] a control element (27), for influencing a supply pressure delivered by a hydraulic supply, actuates a pressure adjustment unit (30)[[.]] by which a reference pressure, suitable for filling [[a]] the filling space located between the emitter piston (14) and the receiver piston (16), is established.

15. (CURRENTLY AMENDED) ~~The device according to claim 12, wherein~~
A system for rendering a hydraulic actuating device operational, the system including an emitter-receiver system (5) located in a hydraulic transmission path of the hydraulic actuating device and comprising a cylinder accommodating an emitter piston (14) and a receiver piston (16), a position of the emitter piston (14) relative to a position of the receiver piston (16) can vary as a function of a desired operating behavior of the hydraulic actuating device, the emitter piston (14) and the receiver piston (16) both being axially movable relative to one another and, together with an inwardly facing wall of the cylinder, defining a filling space communicating with a filling opening (23) for supplying hydraulic fluid from a fluid supply unit (24) to the emitter-receiver system (5) at a desired volume flow;

04/08 11:52 AM

- 3 -

10/531,693

the fluid supply unit (24) including at least one impulse valve (25) for delivering an essentially constant volume flow and a control device (26) for controlling the essentially constant volume flow, supplied by the fluid supply unit (24) to the emitter-receiver system (5), so that the essentially constant volume flow does not exceed a limiting volume flow (Q_k):

wherein the at least one impulse valve (25) is controlled by impulses from the control device (26) and the fluid supply unit (24) has at least one additional impulse valve (32 or 33) connected thereto by a hydraulic line branch (34); and

a pressure loss of ~~[[an]]~~ the at least one impulse valve (25) through which ~~[[a]]~~ the essentially constant volume flow is passing, is processed ~~[[in]]~~ by the impulse valve control device (26) as a parameter for a defined pressure drop at the valve.

16. (CURRENTLY AMENDED) The ~~[[device]]~~ system according to claim 12, wherein in relation to a type and an interconnection of the impulse valves (25, 32, 33), the impulse valve control device (26) makes a selection that results in a defined flow resistance, which does not exceed a limiting flow volume (Q_k) directed towards the filling opening (23) of the filling space.

17. (CURRENTLY AMENDED) The ~~[[device]]~~ system according to claim 12, wherein the impulse valve control device (26) comprises a data memory (29) in which flow resistance parameters of the at least one impulse valve (25) are or will be stored, and the flow resistance parameters are taken into account when computing a maximum permissible volume flow for filling the emitter-receiver system (5).

8/4/06 11:52 AM

- 4 -